Laws of Indices

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Examples

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Workout

Question 1: Write as a single power of m.

(a) $m^2 \times m^3$ (b) $m^3 \times m^3$ (c) $m^6 \times m^2$ (d) $m^7 \times m^3$ (e) $m^6 \times m^8$ (f) $m^2 \times m$ (g) $m \times m^3$

(h) $m^7 \times m^8$ (i) $m^9 \times m^2$ (j) $m \times m^8$ (k) $m^6 \times m^5$ (l) $m^2 \times m^2 \times m^2 \times m^2$

Question 2: Write as a single power of n.

(a) $n^5 \div n^2$ (b) $n^8 \div n^3$ (c) $n^9 \div n^2$ (d) $n^7 \div n^5$ (e) $n^3 \div n$ (f) $n^8 \div n$ (g) $n^7 \div n^4$

(h) $n^9 \div n^3$ (i) $n^4 \div n^8$ (j) $n \div n^3$ (k) $n^{45} \div n^5$ (l) $n^3 \div n^3$

Question 3: Write as a single power of a.

(a) $\frac{a^5}{a^2}$ (b) $\frac{a^9}{a^3}$ (c) $\frac{a^{10}}{a^2}$ (d) $\frac{a^7}{a}$

(e) $\frac{a^{14}}{a^7}$ (f) $\frac{a^4}{a^4}$ (g) $\frac{a^3}{a^4}$ (h) $\frac{a^5}{a^9}$

Question 4: Write as a single power of y.

(a) $(y^5)^2$ (b) $(y^3)^2$ (c) $(y^4)^3$ (d) $(y^5)^4$ (e) $(y^3)^6$ (f) $(y^7)^3$ (g) $(y^6)^6$

(h) $(y^9)^2$ (i) $(y^4)^8$ (j) $(y^3)^{-5}$ (k) $(y^{-5})^2$

Question 5: Write as a single power of y.

(a) $y^7 \times y^3$ (b) $y^9 \div y^7$ (c) $y^6 \div y^2$ (d) $(y^3)^5$ (e) $y^7 \div y$ (f) $y^3 \div y^7$ (g) $(y^9)^5$

(h) $y^6 \times y^7$ (i) $y^6 \times y^5 \times y^2$ (j) $y^8 \times y \times y^3$ (k) $\frac{y^8}{y^5}$

Laws of Indices

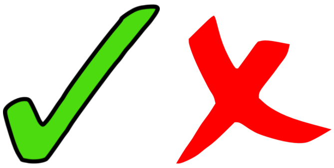
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Question 6: Write as a single power of x.

(a) $(2x^3)^2$ (b) $(5x^6)^2$ (c) $(5x^5)^3$ (d) $(2x^3)^4$ (e) $(7x^5)^2$ (f) $(4x^7)^3$ (g) $(2x^6)^6$

(h) $(10x^9)^3$ (i) $(3x^4)^4$

Answers



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